

**CLAIMS**

What is claimed is:

1           1.     A stent with a tubular support frame (2) that can be  
2     widened out from an initial state (A) into a support state (S), in which  
3     the support state (2) consists of at least two annular segments (3 – 6)  
4     that are formed by struts (7, 8, 9, 10) that endlessly follow each other in  
5     a corrugated manner via transitional sections (1, 12) and in which  
6     adjacent annular segments (3 – 6) are coupled by connectors (13),  
7     characterized in that every second front transitional section (12) on the  
8     end-side annular segments (3; 6), viewed in the direction of the  
9     longitudinal axis (L) of the stent, has a widened head end (18) that  
10    projects axially opposite the adjacent transitional sections (11) and has  
11    a convexly rounded front section (19) and concavely rounded throat  
12    sections (20, 21) between the head end (18) and the struts (9, 10)  
13    connected to the head end (18).

1           2.     The stent according to Claim 1, characterized in that the  
2     head ends (18) are configured in a mushroom shape and that the  
3     convex front sections (19) and the concave throat sections (20, 21) are  
4     connected to each other by rounded edge sections (22, 23).

1           3.     The stent according to Claim 1 or 2, characterized in that  
2     the throat sections (20, 21) extend at least in areas over the edge-side  
3     transitional sections (11) of the adjacent struts (7, 8) in the initial state  
4     (A).

1           4.     The stent according to one of Claims 1 to 3, characterized  
2     in that deflection elements (24, 25) for a thread looping around the  
3     outside of the support frame (2) are arranged on the end-side annular

4 segments (3, 6), viewed in the direction of the longitudinal axis (L) of  
5 the stent.

1        5.     The stent according to one of Claims 1 to 4, characterized  
2 in that each connector (13, 13') is designed like a strut and has a  
3 longitudinal section (14, 14') running substantially parallel to the  
4 longitudinal axis L of the stent and comprises a compensation section  
5 (15, 15') aligned transversally to the latter and configured in a U or V  
6 shape.

1        6.     The stent according to Claim 5, characterized in that the  
2 U-shaped compensation sections (15, 15') of the connectors (13, 13')  
3 are arranged in the area (16) between two axially adjacent, spaced  
4 annular segments (3, 4, 5, 6).

1        7.     The stent according to one of Claims 1 to 6, characterized  
2 in that the connectors (13, 13') extend out from the ridge area (17) of  
3 two struts (7, 8) of an annular segment (4, 5) between two struts (7, 8) of  
4 the adjacent annular segment (3, 4, 5, 6) up to the transitional section  
5 (11) of these struts (7, 8).

1        8.     The stent according to one of Claims 1 to 7, characterized  
2 in that the connectors (13, 13') are aligned in axial succession.